ABSTRACT:

A device for biomedical research contains a flat solid support and a plurality of proteins, with the proteins immobilized on the support at pre-determined positions. The proteins immobilized at each position can be different but share a common property. An interactive protein array is produced when proteins that interact with a ligand are immobilized at a position and proteins interact with another ligand are immobilized at another position on the flat support. The interactive protein arrays are produced either by isolating interacting proteins sequentially or simultaneously. Chemical covalent cross-linking is used to stabilize the protein complexes on the array and to immobilize the proteins on the flat support. The devices are used in studying proteins, particularly in identifying protein-protein interactions and their modulators.